

importance, no tool currently exists for the early detection of DRPs at the time of hospital admission for elective surgery. The development of an easy-to-use, predictive tool for DRP risk could significantly improve patient safety during the perioperative period. Purpose

The aim of this study was to develop and validate mediPORT that calculates the likelihood of DRPs in patients upon admission, using routinely available clinical data.

**Method/Study Design:** A case-control study was conducted with elective surgery patients ( $\geq 18$  years) admitted to the pre-anesthesia clinic of the University Hospital Salzburg, all of whom underwent a medication review by pharmacists. A multivariable logistic regression model with backward stepwise selection was used to identify key predictors of DRPs. The model's performance was evaluated by the area under the receiver operating characteristic curve (AUC), and internal validation was carried out using 10-fold cross-validation.

**Findings:** The target population was 11,176 patients. A total of 1,500 patients were randomly selected, with 284 cases experiencing at least one DRP and 980 controls without DRPs included in the final analysis. The five-variable model included age, the number of medications at admission, body mass index (BMI), sex, and renal function, all of which were identified as key predictors of DRPs. A simpler two-variable model, consisting of age and number of medications at admission, also demonstrated strong predictive accuracy. The AUC for the five-variable model was 0.856 (SD 0.040), and for the two-variable model, 0.847 (SD 0.043). Sensitivity and specificity for the five-variable model were 77.6% and 76.5%, respectively, and for the two-variable model, 81.3% and 75%.

**Conclusion:** mediPORT is a simple, effective tool for predicting DRPs in pre-operative patients, providing a quick and easy method for identifying patients at high risk for DRPs. The tool's strong performance in internal validation suggests its potential for use in clinical practice, where rapid identification of high-risk patients can enhance patient safety. Building on this, an external validation study is planned to assess mediPORT across both inpatient and outpatient settings in Austria. This upcoming multicenter validation will further refine the tool and could meaningfully improve patient safety by reducing the occurrence of DRPs nationwide.

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#### Development of an interprofessional healthcare service for chronic hypertension management: A qualitative study involving patients, general practitioners and pharmacists

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**Background:** In Switzerland, 22% of men and 17% of women are diagnosed with hypertension. Additionally, it has been shown that over 60% of patients have uncontrolled blood pressure. In other countries, interprofessional services involving various healthcare professionals (HCPs), such as pharmacists, general practitioners (GPs), and other specialists, have been implemented to co-support patients in the management of chronic hypertension. These services have shown a positive impact on the health of patients diagnosed with hypertension. In Switzerland, there is no specific national interprofessional care management for these patients.

**Purpose:** The aim of this study was to develop the framework of a new interprofessional service for chronic hypertension management using participatory methods involving patients, pharmacists and GPs.

**Method:** Six patients diagnosed with hypertension participated in a focus group. In addition, semi-structured interviews were organized for six pharmacists and six GPs. Patients and HCPs shared how they currently manage hypertension, their thoughts on how communication should occur, and their vision for a new interprofessional service for managing hypertension. The interviews were audio-

recorded and subsequently transcribed anonymously. Data analysis was conducted using MAXQDA® software (version 24.2.0) and followed a systematic approach based on the step-by-step procedure of thematic analysis by Naeem et al.

**Results:** Currently, most patients are diagnosed and followed up at GP practices, while receiving medication from pharmacies. For patients, important aspects of a new interprofessional service were a consultation room to conduct services, efficient communication between HCPs and the reimbursement carried out through health insurances. Almost all pharmacists and GPs recognized the benefits of co-care management in enhancing patient care, reducing costs, and relieving patient burdens. However, this kind of collaboration seemed complicated in some parts of Switzerland, where GPs can dispense medication in their medical practice. For the HCPs interviewed, clear role definition and efficient communication between each other are essential to create an effective co-care service. Most of the HCPs would prefer an online communication tool. Some of them also felt that it would be beneficial if pharmacists could have more responsibilities in terms of medication change e.g. for the purpose of blood pressure targets.

**Conclusion:** Pharmacists and GPs are interested in sharing the care of chronic hypertensive patients and patients would be wanting to benefit from it. Further research with more HCPs and patients is needed, to co-develop a realistic and useful service to improve the care of the patients with hypertension.

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#### Changes in Inhalation Therapy in Patients with Lung Cancer –a Retrospective Cohort Study

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**Background:** The symptoms of lung cancer and COPD are often overlapping. Moreover, both diseases are highly associated with a smoking history. Thus, inhalation therapy for obstructive lung diseases may often be initiated or modified prior to an initial lung cancer diagnosis, possibly with no valid indication and contributing to additional adverse events (AEs).

**Purpose:** To describe the characteristics and changes in inhalation therapy in patients with non-small-cell lung cancer (NSCLC) before, at and after its initial diagnosis.

**Method:** A retrospective observational cohort study in patients with NSCLC, treated at the University Clinic Golnik, Slovenia, a referral centre for diagnosis and treatment of pulmonary disease, was conducted. Patient information and other medical data were collected by reviewing patient medical records. At the study centre, data on cancer treatment, concomitant medications and AEs during cancer treatment are collected prospectively and using pre-specified proformas.

**Findings:** From the 298 reviewed NSCLC patients, 80 (27%) had an inhalation therapy changed up to 6 months prior to NSCLC diagnosis, with 62 patients (21%) being prescribed an inhalation therapy for the first time ever. Of the 80 patients with a change in inhalation therapy, the majority (74; 93%) reported respiratory symptoms at the time of NSCLC diagnosis. The indication for inhalation therapy was COPD (48/80; 60%), asthma (7/80; 9%) or both (8/80; 10%), while as much as a fifth of patients (17/80; 21%) had no valid indication. Prior to NSCLC diagnosis, patients had prescribed a median of 3 inhalation agents (IQR: 2–4), with short-acting bronchodilators (SABA/SAMA) being prescribed most often (69/80; 86%) and inhalation corticosteroids (ICS) being prescribed in 39% (31/80) of patients. Patients often discontinued inhalation therapy over time, with only 55/80 (69%) and 40/72 (56%) taking inhalation medications at the start and six months after cancer treatment initiation, respectively. Oral candidiasis occurred more often in patients with vs without ICS (16/31; 52% vs 14/49; 29%;  $\chi^2$ ,  $p=0.038$ ) but not pneumonia (13/31; 42% vs 14/49; 29%;  $\chi^2$ ,  $p>0.05$ ).

**Conclusion:** Inhalation therapy is initiated or changed in a quarter of patients

prior to lung cancer diagnosis, without a valid indication in a fifth of cases. Patients with an ICS more often experienced oral candidiasis.

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### Optimizing the patient consent processes in community pharmacy services research: a mixed-methods study.

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**Background:** In pharmacy health services, effectively obtaining informed consent to collect patient health related data remains a cornerstone for patient-centred care and research participation. Despite growing interest in leveraging these services for accessible healthcare, providers often encounter barriers when collecting consent which limits participation and achieved outcomes. This study investigates patient perceptions and preferences of consent processes within primary care pharmacy contexts, thus providing insights into consent process enhancement to improve patient engagement.

**Purpose:** The objectives of this research are to (1) examine patients' experiences and perceptions of consent in a community pharmacy setting, (2) identify factors affecting the acceptability of consent processes, (3) develop alternative consent form prototypes, and (4) propose an optimised patient-centred consent model.

**Methods:** A bi-phasic mixed-methods approach integrating qualitative interviews and patient focus groups was utilised. In Phase One, semi-structured interviews with patient as partners were conducted to examine patient experiences, perceptions and preferences regarding the collection of study consent. Qualitative data was analysed deductively in accordance with the behaviour change framework COM-B model to identify factors affecting the acceptability of consent. In Phase Two, alternative consent form prototypes were developed based on Phase One findings. Prototypes have then been evaluated quantitatively using 6-point Likert scale and discussed in a patient focus groups including community-based patients, patient stakeholders and patient partners.

**Findings:** Five patient partners were interviewed during Phase One. Analysis is still ongoing, however, thus far, 13 factors have been mapped in accordance with the COM-B framework. *Psychological capability* (patient health literacy, research literacy, patient understanding of consent forms, patient perceptions towards health data sharing), *physical capability* (technological barriers, age-related factors influencing patient uptake of study participation), *reflective motivation* (incentives for participation, pharmacist's role in recruitment), *automatic motivation* (patients' attitudes and emotions towards signing a consent form), *physical opportunity* (written support, time and space for decision-making), *social opportunity* (social pressure to accept, social connection between patient and pharmacist). Guided by these insights, alternative consent form prototypes were co-created, incorporating various formats: a long-form, a short-form (with and without image support), an electronic consent form with e-signature, and an audio-visual presentation of information to improve understanding of the importance of data collection.

**Conclusion:** Findings are anticipated to significantly contribute to refining patient consent processes in pharmacy research toward a more accessible, patient-preferred consent model, potentially leading to higher research participation rates.

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### Evaluation of an adapted New Medicine Service for the Swiss setting (myCare Start-I project) –a Hybrid Type II (cost)-effectiveness-implementation study protocol

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**Background:** In Switzerland, nearly half the population suffers from at least one long-term disease. Medication non-adherence worsens outcomes, and increases hospitalizations, mortality, and healthcare costs. While the UK's New Medicine Service (NMS) improved adherence by 10%, yet implementation in other countries has largely failed. The myCare Start Implementation Project (myCare Start-I) adapts NMS to Switzerland using implementation science. In Phase A, the NMS was adapted to the Swiss context and an implementation strategy package was developed through a contextual analysis using an iterative co-creation process with stakeholders.

**Purpose:** To evaluate the myCare Start service in Switzerland in view of effectiveness outcomes

i.e. medication adherence (primary outcome); cost-effectiveness, and implementation outcomes i.e. acceptability, adoption, appropriateness, fidelity, feasibility, reach and implementation cost.

**Methods:** We will use a Hybrid Type II effectiveness-implementation study design. The contextually adapted and interprofessional myCare Start service will be rolled-out in 30-40 early adopter pharmacies in the French- and German-speaking regions of Switzerland using a stepped wedge cluster randomized design. Adults with a prescription for a new long-term medicine will be eligible for inclusion. Medication initiation adherence will be assessed over 12 months using health insurance data and patient self-reports collected via the BAASIS® questionnaire at 6 weeks, and at 3, 6, and 12 months following the myCare Start service. Total healthcare costs and costs per quality-adjusted life years (QALY) will be estimated using health insurance data and patient reported quality of life (EQ-5D-5L). Markov modelling will be used to extrapolate results beyond trial follow-up. Implementation outcomes will be assessed from patient, pharmacist and physician perspective by a mix of quantitative surveys and qualitative interviews using validated tools and investigator-developed questions. Implementation costs (e.g. training, promotion, facilitation) will be calculated with the time-driven activity-based costing (TDABC) tool.

**Findings:** The trial is expected to begin in April 2025 and will last for 12 to 18 months. We hypothesise that patients receiving the myCare Start service will have higher rates of medication adherence, thereby translating into reduced overall healthcare utilisation and costs.

**Conclusion:** Evaluating the (cost)-effectiveness and implementation of the contextually adapted interprofessional myCare Start service will clarify its economic and therapeutic benefits for medication adherence at initiation as well as the implementation pathway in the Swiss primary care setting. A cost-effective and successfully implemented myCare Start service will provide the basis for further scale-up in the future.

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